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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/771,997	02/04/2004	Osamu Nozawa	0524-0139.01	4072

7590 03/09/2005

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EXAMINER

VERSTEEG, STEVEN H

ART UNIT	PAPER NUMBER
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1753

DATE MAILED: 03/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/771,997

Applicant(s)

NOZAWA ET AL.

Examiner

Steven H VerSteeg

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 25 January 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 26-29 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 26-29 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☒ Certified copies of the priority documents have been received in Application No. 09/952,445.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 112*

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 26-29 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Subject matter has been incorporated into claims 26 and 27 that is considered to be new matter. Specifically, support could not be found in the specification as originally filed for “wherein said load lock chamber is able to draw a vacuum to a predetermined chamber pressure each time before said substrate is introduced into said sputtering chamber” in claim 26 and “square shaped substrate” in claim 27. Claims 28 and 29 depend from claim 27 and contain all of the limitations of claim 27. Thus, claims 28 and 29 are rejected for the same reasons as claim 27.

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claim 29 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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5. Claim 29 recites the limitation "the electrical discharge" in line 3. There is insufficient antecedent basis for this limitation in the claim.

*Claim Rejections - 35 USC § 102*

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claim 26 is rejected under 35 U.S.C. 102(b) as being anticipated by US 5,934,856 to Asakawa et al. (Asakawa).

8. For claim 26, Applicant requires an apparatus comprising a sputtering chamber wherein only one substrate at a time is introduced therein for forming a film on the substrate; a load lock chamber for placing the substrate on standby prior to introduction to the sputtering chamber wherein the chamber is able to draw vacuum to a predetermined chamber pressure each time before the substrate is introduced into the sputtering chamber; an unload lock chamber for placing the substrate upon exit from the sputtering chamber; and a substrate conveying means for introducing a substrate one by one continuously at a constant interval from the load lock chamber to the sputtering chamber and from the sputtering chamber to the unload lock chamber.

9. Asakawa discloses a multi-chamber treatment system (title) comprising a sputtering chamber (col. 6, l. 23-26), a load lock chamber 13, unload lock chamber 12, and substrate conveying mechanism (col. 6, l. 37-51). The substrates are placed one at a time into the sputtering chamber (col. 6, l. 20-22). The load lock is drawn to a vacuum (col. 8, l. 15-23).

*Claim Rejections - 35 USC § 103*

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 27 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 5,798,027 to Lefebvre et al. (Lefebvre) in view of US 4,096,026 to Takeuchi.

12. For claim 27, Applicant requires an apparatus comprising a substrate holder for holding a square shaped substrate and having a rotation mechanism; and a target placed in an opposed position with a center axis of the target deviating from a center axis of the substrate held by the substrate holder.

13. Lefebvre discloses a sputtering apparatus (abstract) comprising a rotating substrate holder 14; and a target (col. 6, l. 65 – col. 7, l. 14) with a center of axis that deviates from the center of axis of the substrate whenever the substrate is rotated.

14. Lefebvre does not disclose the substrate to be square shaped, but does show the substrate to be rectangular (Figure 1).

15. Takeuchi discloses that when processing a photomask blank by sputtering, the photomask blank substrate can be square-shaped (Example 5).

16. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Lefebvre to utilize a square shaped substrate because of the desire to produce a photomask blank.

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17. For claim 28, Applicant requires the target to be placed so that the opposed surface of the target and the substrate form a predetermined angle therebetween. The fact that the center axes of the substrate and target are not aligned inherently means that a predetermined angle is present.

***Specification***

18. The substitute specification filed January 25, 2005 has been entered.

***Response to Amendment***

19. All rejections and objections presented in the office action mailed September 13, 2004 are withdrawn in light of the amendment.

***Response to Arguments***

20. Applicant's arguments with respect to claims 26-29 have been considered but are moot in view of the new ground(s) of rejection necessitated by the amendment.

***General Information***

For general status inquiries on applications not having received a first action on the merits, please contact the Technology Center 1700 receptionist at (571) 272-1700.

For inquiries involving Recovery of lost papers & cases, sending out missing papers, resetting shortened statutory periods, or for restarting the shortened statutory period for response, please contact Denis Boyd at (571) 272-0992.

For general inquiries such as fees, hours of operation, and employee location, please contact the Technology Center 1700 receptionist at (571) 272-1300.

*Conclusion*

21. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven H VerSteeg whose telephone number is (571) 272-1348. The examiner can normally be reached on Mon - Thurs (6:30 AM - 5:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nam X Nguyen can be reached on (571) 272-1342. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Steven H VerSteeg  
Primary Examiner  
Art Unit 1753

shv  
March 7, 2005